

**REMARKS/ARGUMENTS**Claim Status

Claims 1-43 are pending. Claims 22 and 33 stand allowed. Claims 1-14, 16-21, 23-32, and 34-43 stand rejected. Claim 15 stands objected to.

Claims 1, 6, 9, 10, 17, 23, 28, 34, 39, and 43 have been amended. Claims 5, 16, 27, and 38 have been canceled. No claims have been added.

Claim Rejections - 35 U.S.C. § 102

Claims 1-14, 16-21, 23-25, 27-32, and 34-43 stand rejected under 35 U.S.C. § 102(a) as being anticipated by what the Office Action alleges to be Applicant's admitted prior art, namely FIG. 6.

Applicant traverses this rejection. Nothing in FIG. 6 shows "a plurality of compressors interconnected in a Wallace tree configuration and having the same width," as expressly recited by claim 1. For example, although the system 600 of FIG. 6 has a Wallace tree structure, the compressors which are interconnected in the Wallace tree structure in FIG. 6 do not have the same width. Rather, as stated at p. 17, lines 25-30:

... in the system illustrated in FIG. 6, compressors in different rows may have widths that differ substantially from each other. For example, although the compressors 604a-d in row 626a are 71 bits wide, the compressors 604e-f in row 626b are 72 bits wide, and the compressor 604g in row 626c is 80 bits wide.

Although the plurality of compressors 604a-d in row 626a may have the same width as each other, the compressors 604a-d alone are not "interconnected in a Wallace tree configuration," as expressly required by claim 1. Rather, it is the compressors 604a-g in FIG. 6 which are interconnected in a Wallace tree configuration. These compressors 604a-g do not all have the same width.

All claims in the present application now include the same relevant limitation, either directly or by dependency, and therefore patentably distinguish over FIG. 6 for at least the same reason.

All pending claims also patentably distinguish over Hale (U.S. Pat. No. 6,442,582 B1) and Wang (U.S. Pat. No. 6,692,534 B1) for at least the same reason. Neither of these references discloses "a plurality of adders comprising a plurality of compressors interconnected in a Wallace tree configuration and having the same width."

Although the Office Action states that the compressors 14a-f in Hale's FIG. 1 have the same width, Hale does not in fact disclose that the compressors 14a-f have the same width, and the Office Action does not point to any specific passage in Hale that provides such a disclosure. Even if the compressors 14a-d in the top row of Hale's FIG. 1 were assumed for purposes of argument to have the same width, the top row of compressors 14a-d alone is not "interconnected in a Wallace tree configuration" as required by the claims of the present application. Because all pending claims include this limitation, either directly or by dependency, all pending claims patentably distinguish over Hale.

Similarly, although the Office Action states that the compressors 164-180 in Wang's FIG. 6 have the same width, Wang does not in fact disclose that the compressors 164-180 have the same width, and the Office Action does not point to any specific passage in Wang that provides such a disclosure. Even if the compressors 164-170 in the top row of Wang's FIG. 6 were assumed for purposes of argument to have the same width, the top row of compressors 164-170 alone is not "interconnected in a Wallace tree configuration" as required by the claims of the present application. Because all pending claims include this limitation, either directly or by dependency, all pending claims patentably distinguish over Wang.

For the reasons presented above, all pending claims as currently presented patentably distinguish over all of the cited references.

Claim Rejections - 35 U.S.C. § 112

Claims 6, 17, 23-32, and 39 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 6, 17, 28, and 39 have been amended to clarify that the width of each compressor is equal to the sum of the widths of the inputs of the compressor.

Claim 23 has been amended to clarify that the plurality of compressors has a plurality of inputs and a plurality of outputs.

**CONCLUSIONS**

Any dependent claims not specifically discussed above depend, either directly or indirectly, from the independent claims discussed above and therefore are patentable for at least the same reason(s).

If the Examiner wishes to discuss this Response, the Examiner is requested to call the Applicant's attorney at the phone number listed below.

If this response is not considered timely filed and if a request for extension of time is otherwise absent, applicant hereby requests any extension of time. Please charge any fees or make any credits, to Deposit Account No. 50/1797.

Respectfully submitted,

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